

Inv-2193

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
NORTHWESTERN PACIFIC RAILROAD

CAMP NINE, CALIF.

AUGUST 6, 1937.

INVESTIGATION NO. 2193

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SUMMARY

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Railroad:	Northwestern Pacific
Date:	August 6, 1937
Location:	Camp Nine, Calif.
Kind of accident:	Derailment
Train involved:	Freight
Train number:	Extra 182
Engine number:	182
Consist:	25 cars and caboose
Speed:	Low speed
Track:	2° curve to the right and practically level grade for south-bound trains.
Weather:	Clear
Time:	3:10 a.m.
Casualties:	3 killed
Cause:	Burning bridge.

September 14, 1937.

To the Commission:

On August 6, 1937, there was a derailment of a freight train on the Northwestern Pacific Railroad at Camp Nine, Calif., which resulted in the death of three employees.

Location and method of operation

This accident occurred on that part of the Northern Division which extends between Willits and Eureka, Calif., a distance of 144.6 miles. This is a single-track line over which trains are operated by timetable and train orders, no form of block-signal system being in use. The accident occurred on the southern end of Trestle 247-D, located approximately 41 feet south of the south switch of Camp Nine Siding. Approaching this point from the north a series of short curves and tangents is followed by a 2° curve to the right 1,318 feet in length, upon which the trestle is located, with its northern end 395 feet from the northern end of the curve. At the point of accident the grade was 0.1 percent descending for south-bound trains.

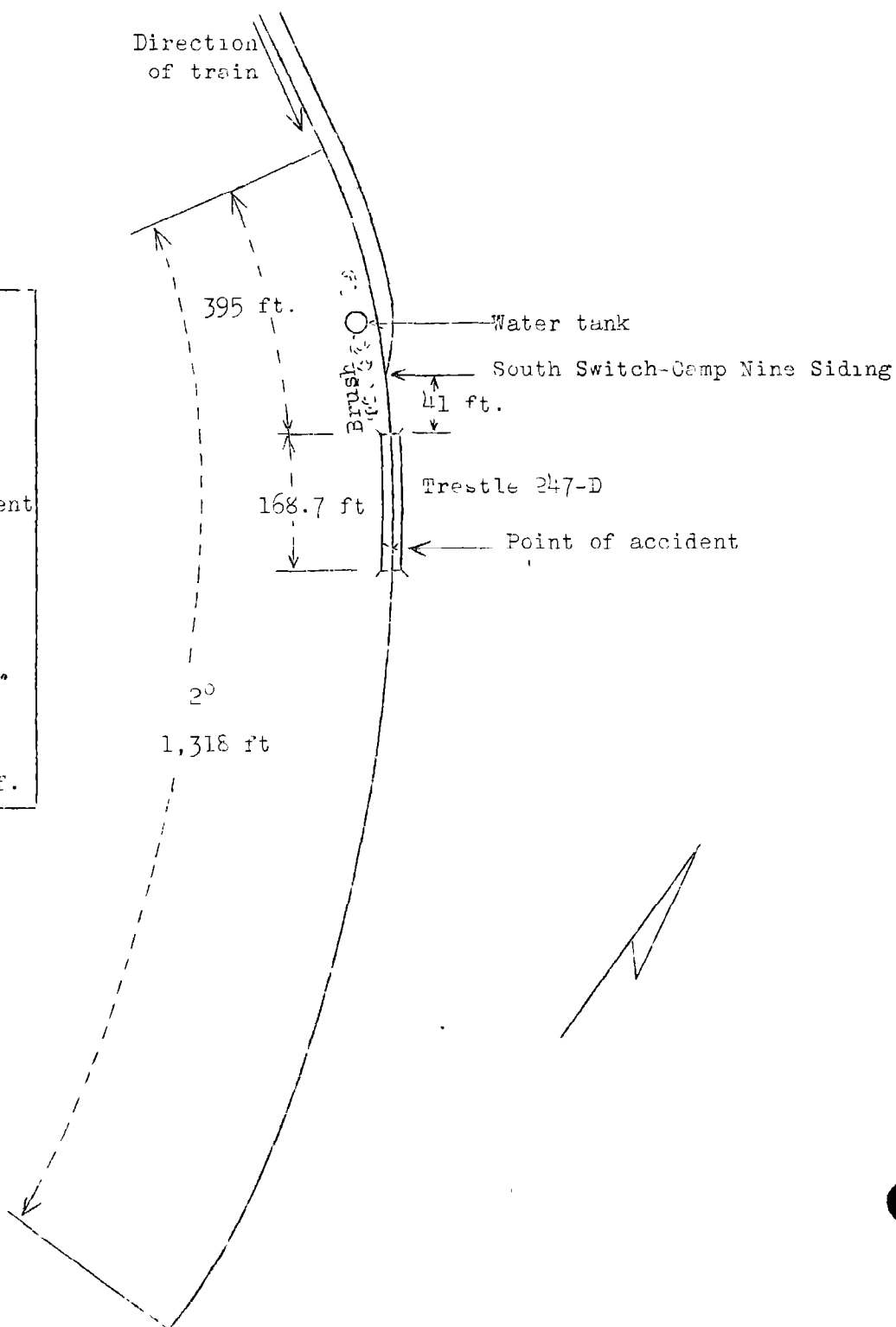
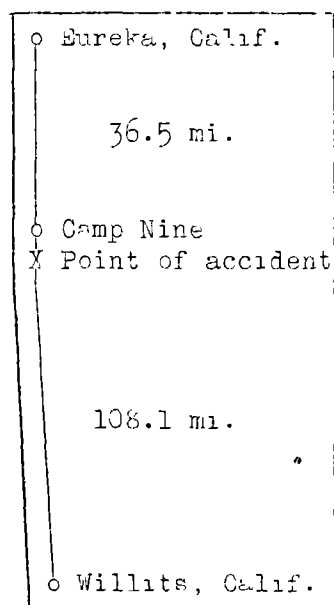
In the vicinity of the point of accident the track is laid with 75-pound rails, 33 feet in length, on untreated pine ties, double-spiked and fully tie-plated. The maximum authorized speed for freight trains in this territory is 25 miles per hour.

Trestle 247-D is of the standard open-deck type, 168.7 feet in length, with thirteen 5-pile bents, redwood piling, redwood caps, and 8 by 17 inch untreated pine stringers; pine guard rails are provided on the outside of each rail. The bents, which are numbered from south to north, are provided with sway, horizontal, and longitudinal bracing. The maximum height of the trestle is 34 feet. It was rebuilt in 1928.

The weather was clear at the time of the accident, which occurred at 3:10 a.m.

Description

Extra 182, a south-bound freight train, consisted of 25 cars and a caboose, hauled by engine 182, and was in charge of Conductor Forsman and Engineman Weatherby. This train departed from Eureka, 36.5 miles from Camp Nine, at 12:35 a.m., according to the train sheet, passed the siding at Camp Nine



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Northwestern Pacific R.R.
Camp Nine, Calif.
August 6, 1937

at a speed estimated to have been about 20 miles per hour, and became derailed on Trestle 247-D which had been weakened by a fire that was still in progress.

The engine rolled off the right side of the trestle and stopped bottom side up on the south embankment parallel with the track; the tender was on its right side at the rear of the engine, and the first car stopped bottom side up near the foot of the embankment. None of the remaining equipment was damaged. The employees killed were the engineman, fireman and head brakeman.

Summary of evidence

Conductor Forsman stated that the air brakes had been tested and worked satisfactorily en route. Approaching the trestle near Camp Nine his train was moving at a speed of about 20 miles per hour; he was unable to say whether or not the brakes had been applied just prior to the accident. He was in the left side of the cupola and the flagman was in the right side, and when the train stopped the flagman, who was looking ahead through the cupola window, said that it looked like a fire ahead as he could see the reflection against escaping steam. Conductor Forsman immediately walked toward the head end of his train and found the trestle on fire, the engine, tender and first car had dropped off of the trestle toward the right, and the second car was standing on the north end of the bridge. The trestle was burning only on the right side and from about the middle to the south end. The fire was at the top of the trestle, and the flames rose about 2 feet above the top of the rail; he did not notice any fire below the caps other than sparks dropping down. There were no marks of derailment on the track or trestle. The accident occurred at 3:10 a.m.

Flagman Atwell stated that the train was traveling at a speed of about 20 miles per hour when he felt an emergency application of the air brakes, which in his opinion was made by the engineman, and which had reduced the speed at the time of the accident. He thought the train traveled a distance of four or five car lengths after the application was made. He had talked with Head Brakeman Still, who was pinned in the wreckage, and the brakeman had indicated to him that they had had some warning of approaching danger and had jumped from the engine, the fireman being the first to leave.

Section Foreman Jackson arrived at the scene of accident about 40 minutes after its occurrence and the trestle was still burning, the fire extending on the right side from the middle

of the bridge southward a distance of 60 feet. Practically all of this portion was in flames but the fire was confined to the deck, the ties, stringers and caps. There was no fire below except the coals that had dropped down. He stated that he had cut the grass and weeds from under and around the trestle on June 4, 1937, when he took charge of that section, and while he had not been over the track since July 31st, the track-walker had been over it on August 5, the day prior to the accident.

Roadmaster Rice stated that there were no marks on the track to indicate that the engine had been off the track before turning over. The right rail near bent 5 had been turned over and there were wheel marks on the ball of the rail, evidently made by the engine as it turned over. This rail was broken. He also stated that there had been two fires on trestles located in his territory during the last 60 days and in both cases the fire apparently had started in the deck of the trestle. He was unable to determine the cause of the fires.

Carpenter Delcozzo, of the B. & B. Department, stated that at the time of his arrival at the scene of the accident, about 1 hour 15 minutes after its occurrence, the fire extended about 45 feet along the west side of the trestle from bent 4 to bent 7, and was confined to the deck. Apparently it had started at either bent 5 or 6. There was no indication that the bridge had been deliberately set on fire, nor was there any evidence of ground fires under the trestle; all the near-by vegetation was green.

General Foreman Pagels, of the B. & B. Department, stated that when he arrived at the scene about 7:45 a.m. the fire had been put out and the trestle was smoking. The fire had damaged the trestle at four bents; about half the stringers within the section that had been on fire were burned out and the other half charred. It was his opinion that it started on the cap at bent 7, and resulted from a burning cigarette or brake-shoe spark from the preceding passenger train.

Engineer of Bridges Rear, of the Southern Pacific Company, stated that his examination of the trestle did not show any special condition to indicate that it had been set on fire, but there was evidence that the fire had been burning for a considerable time before the accident. It appeared that the fire had started over the cap at bent 7 and worked partly north, but more to the south on the west or right side of the trestle. Neither the ties nor the caps were burned their full length. Some of the stringers on the east side were charred but not seriously burned. The damage extended from a point 35 feet from the south

bulkhead to a point about 70 feet farther northward. There was a lightly charred pile at the ground line at bent 6 and also at bent 7, but these were due to the falling of burning timber. The damage to the trestle caused by the equipment turning over consisted of a broken pile in bent 5 and one which was slightly damaged; there were also several of the longitudinal girts broken off. The broken rail at the point where the engine left the bridge was within 30 feet of the south bulkhead, and he thought that the engine had passed over five bents from the point where the fire started. While he had seen red hot brake shoe slivers weighing probably half a pound that had started fires on the roadbed, he did not find any evidence of large brake shoe slivers adjacent to the bridge. Other than the damage due to the fire, the bridge was in good, serviceable condition, and there was nothing about the construction or condition of the trestle that would have contributed in any way to the accident.

Assistant Engineer Gilman stated that he had taken measurements to ascertain the view an engineman of a south-bound train would have approaching this trestle and he found that an engineman could have had a view of a small fire from a point 300 feet north of the north end of the trestle, or 365 feet from the fire; however, if the fire had been of great magnitude he could have seen it for a distance of 460 feet. His statement agreed with those of other witnesses with respect to the extent of the damage to the trestle caused by the fire.

Master Mechanic Cavanaugh stated that the last train to pass over the trestle prior to the train involved in the accident was passenger train No. 3, engine 143; this train passed Camp Nine about 9:40 p.m., August 5. Inspection of this engine on its arrival at Sausalito did not reveal any defects that might have caused or contributed to the cause of the fire. A second inspection was made of this engine by Supervisor of Boilers McAdams, Mechanical Draftsman Gullholm, Roundhouse Foreman Callahan and Foreman Motive Power & Car Department Salkeld, on the afternoon of August 6, and their report showed that the front end of the smoke box, spark arrester, firebox, and fire pan were thoroughly inspected and found to be in first-class condition and free of any defects that would cause starting of a fire on the roadbed. The work reports for the past 30 days did not show any defects on this engine that might have been a contributing cause in the origin of fire. Master Mechanic Cavanaugh was unable to give any opinion as to the cause of the fire. He added that this year there had been more fires than usual during this season.

The statements of the members of the crew of Train No. 3, brought out nothing helpful in the determination of the cause of the fire. The engineman stated that he did not make any

application of the air brakes that might have heated the brake shoes to the extent that they would throw off heated metal. His inspection of the engine did not disclose any defects that might have caused a fire. The fireman, conductor and brakemen stated that they did not see any fire flying from this engine on the trip in question. The flagman, who was riding in the rear end of the observation car looking back, stated that he noticed a slight amount of fire dropping down in the vicinity of Scotia, 8 miles north of Camp Nine. It came from underneath the train and lasted only a short time, and he did not think that it would have started a fire.

Discussion

Approaching the trestle from the north the view was materially restricted by brush and a water tank located on the inside of the curve, so that the range of vision to the point of accident was about 365 feet. Apparently the engineman saw the fire when a short distance north of the trestle, and made an emergency application of the air brakes. The fire was on the right side of the trestle only, and extended southward for a distance of about 70 feet from a point near the middle of the bridge; it was confined entirely to the top of the trestle, and did not extend below the caps. The position of the wrecked equipment and the lack of any marks of derailment on the trestle indicated that the engine, tender and first car turned over while moving at a low rate of speed, due to the collapse of the trestle. The last train to pass over this trestle prior to the time of the accident was at 9:40 p.m., approximately 5 hours 30 minutes previously, and a thorough inspection of the smoke box, firebox and fire pan of engine 143 of this train did not disclose any defects that might have contributed to the cause of the fire.

The record of fires on trestles during the period of June 8 to August 6, 1937, inclusive, shows four fires including the one involved in this accident. These fires all occurred within a distance of 100 miles. One at mile post 156 occurred on a wooden deck bridge, 301.5 feet in length, the second at mile post 211 on a 15.5-foot open-deck trestle, and the third at mile post 186 on a 15-foot open-deck trestle. The cause of these fires was undetermined.

Conclusion

This accident was caused by the collapse of a trestle which had been weakened by fire.

Respectfully submitted,

W. J. PATTERSON,
Director.